

R E M A R K S

Claims 39 and 45 have been amended to correct a clerical type error. Claim 51 has been amended to define applicant's contribution to the art in greater particularity. Claims 57 and 58 have been added to define the straight segments of claims 51 and 54 with greater particularity.

Applicant traverses the rejection of claims 39-56 as being based on new matter. The Examiner has basically repeated the same rejection as set forth in the previous Office Action. He has not replied to the arguments set forth by applicant in the last response. These arguments are based on sound reasoning. If the Examiner repeats this rejection, he must set forth why the sound reasoning applicant has set forth from both a technical and legal point of view is incorrect. The Patent and Trademark Office cannot ignore the cogent reasoning applicant introduced to show the subject matter of claims 39-56 is inherent in applicant's disclosure. The Examiner in the present case cannot ignore the action Examiner Bittendorf took. The action Examiner Bittendorf took is in the nature of expert testimony and must be countered by scientific reasoning or other evidence. It is not sufficient for the Examiner to merely say the application as filed did not describe all the claimed features when applicant has provided a sound explanation of how these features are

inherent in applicant's structure and Examiner Bittendorf has in effect testified that these features are inherent.

Applicant again calls the attention of the Examiner to MPEP Sections 2163.05 and 2163.06, which are recited on page 5 of the previous response. These sections of the MPEP indicate the written description requirement of 35 USC 112, paragraph 1, which are basically incorporated into 35 USC 251, indicate a claim limitation can be inherently supported in the originally filed disclosure and information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter. Based on the foregoing, the Examiner has failed to meet his obligation of showing there is new matter in claims 39-56.

The rejection of claims 39-56 under 35 USC 112, paragraph 1, is incorrect for the same reasons that the rejection of these same claims is wrong under 35 USC 251.

Applicant does not understand the statement in item 4, page 3, of the Office Action that "claims 39-56 are rejected under 35 USC 103(a) as being unpatentable over either or Hama et al. '159." The words "either or" do not make sense. Applicant will assume the Examiner intended to reject claims 39-56 as being unpatentable over Hama et al. '159.

The rejection of claims 39-50 as being unpatentable over Hama et al. '159 is incorrect because Hama et al. does not disclose the requirement of these claims for a coil having interior, intermediate and peripheral portions having turns connected to each other and arranged so the magnetic flux density coupled to the plasma by each of the interior and peripheral coil portions exceeds the magnetic flux density coupled to the plasma by the intermediate coil portion. Hama et al. does not disclose greater current flow in the peripheral portion of the coil than in the center of the coil, as the Examiner alleges. Attorney for applicant has carefully reviewed the Hama et al. patent and can find no indication of such a "teaching" or disclosure in Hama et al. '159. Figure 6 includes diagrams of various coil configurations. Attorney for applicant can find nothing in Hama et al. to support the Examiner's statement that there is more current flow in the peripheral portion of these coils than in the coil center portion. The Examiner is requested to indicate the portion of Hama et al. disclosing such a feature. If the Examiner is relying on inherency, he has the burden of proving inherency. MPEP, Section 2112. The Examiner has made no attempt to satisfy that burden.

Claims 51 and 54 as amended, require a lead of the intermediate portion to include a straight segment, a feature not disclosed or suggested by the art of record.

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The rejection of claims 39-56 "under 35 USC 251 as being broadened in a reissue application filed outside the two year statutory period." is incorrect. The present application was filed March 22, 2000; the original patent issued March 24, 1998. Hence, the present application was filed within two years of the issue date of the parent application. The Examiner's comment about limitations being inserted into claims on March 3, 1997, is irrelevant and not understood in connection with the two year period. In this regard, 35 USC 251 states:

No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

Accordingly, withdrawal of this rejection is in order.

In view of the foregoing remarks, allowance is in order.

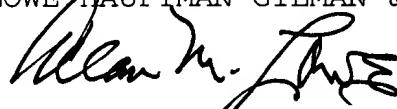
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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including extension of time fees, to Deposit Account 07-1337 and
please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN GILMAN & BERNER, LLP



Allan M. Lowe
Registration No. 19,641

1700 Diagonal Road, Suite 310
Alexandria, Virginia 22314
(703) 684-1111/FAX: (703) 518-5499

AML:cjf

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MARKED UP VERSION SHOWING CHANGES

IN THE CLAIMS:

Please amend claims 39, 45, 51 and 54 as follows:

39. (Amended) A low pressure plasma processor for treating a workpiece with a plasma comprising a low pressure chamber where the workpiece is adapted to be located, the chamber having an inlet for introducing into the chamber a gas which can be converted into the plasma for treating the workpiece, a coil positioned to couple an RF field to the gas for exciting the gas to the plasma state, the coil including interior, intermediate and peripheral portions, the interior, intermediate and peripheral portions having turns connected to each other and arranged so the magnetic flux density coupled to the plasma by each of the interior and peripheral coil portions exceeds the magnetic flux density coupled to the plasma by the intermediate coil portion.

45. (Amended) A coil for use with a low pressure plasma processor for treating a workpiece with an RF plasma wherein the processor includes a low pressure chamber where the workpiece is adapted to be located, and the chamber has an inlet for introducing into the chamber a gas which can be converted into the RF plasma for treating the workpiece, the coil being adapted to be positioned to couple an RF field to the gas for exciting

the gas to the plasma state, the coil comprising: interior, intermediate and peripheral portions, the interior, intermediate and peripheral portions having turns connected to each other and arranged so the magnetic flux density coupled to the plasma by each of the interior and peripheral coil portions exceeds the magnetic flux density coupled to the plasma by the intermediate coil portion.

51. (Amended) A coil for use with a low pressure plasma processor for treating a workpiece with an RF plasma wherein the processor includes a low pressure chamber where the workpiece is adapted to be located, and the chamber has an inlet for introducing into the chamber a gas which can be converted into the RF plasma for treating the workpiece, the coil being adapted to be positioned to couple an RF field to the gas for exciting the gas to the plasma state, the coil comprising: interior, intermediate and peripheral portions, the interior portion including plural radially and circumferentially extending turns, the exterior segment having at least one circumferentially extending turn, the intermediate portion being configured so it (a) does not include a complete turn, (b) is substantially less than a complete turn, and (c) includes a lead connected to ends of the turns of the interior and exterior portions, the lead having at least a portion that is straight.

54. (Amended) A low pressure plasma processor for treating a workpiece with a plasma comprising a low pressure chamber where the workpiece is adapted to be located, the chamber having an inlet for introducing into the chamber a gas which can be converted into the plasma for treating the workpiece, a coil positioned to couple an RF field to the gas for exciting the gas to the plasma state, the coil including interior, intermediate and peripheral portions, the interior portion including plural radially and circumferentially extending turns, the exterior segment having at least one circumferentially extending turn, the intermediate portion being configured so it (a) does not include a complete turn, (b) is substantially less than a complete turn, and (c) includes a lead connected to ends of the turns of the interior and exterior portions, the lead having at least a portion that is straight.